should not be limited to devices consisting only of components A and B. This expression signifies that, with respect to the present disclosure, the only relevant components of the device are A and B.

[0786] Furthermore, the terms "first," "second," "third," and the like, whether used in the description or in the claims, are provided for distinguishing between similar elements and not necessarily for describing a sequential or chronological order. It is to be understood that the terms so used are interchangeable under appropriate circumstances (unless clearly disclosed otherwise) and that the embodiments of the disclosure described herein are capable of operation in other sequences and/or arrangements than are described or illustrated herein.

What is claimed is:

1. A system for regulating fluid flow having a processor configured to reduce image noise, the system comprising:

an image sensor configured to capture an image of a drip chamber; and

a valve configured to regulate fluid flowing from the drip chamber to a patient, wherein the processor is configured to:

capture the image of the drip chamber using the image sensor,

perform an edge detection on the image to generate a first processed image, and

perform an AND-operation on a pixel on a first side of an axis of the first processed image with a corresponding mirror pixel on a second side of the axis of the first processed image to generate a second processed image.

2. The system according to claim **1**, wherein the edge detection is performed using a canny edge detection.

3. The system according to claim **1**, wherein the processor is configured to match a template to the image.

4. The system of claim **3**, wherein the template includes at least a partial image of a drop of the fluid forming within the drip chamber.

5. The system of claim **1**, wherein the processor is configured to apply a blurring function to the image captured by the image sensor of the drip chamber.

6. The system according to claim **5**, wherein the blurring function is a low pass filter.

7. The system according to claim **5**, wherein the blurring function is configured to blur in a vertical direction.

8. The system according to claim **5**, wherein the blurring function is configured to blur in a horizontal direction.

9. The system according to claim **5**, wherein the blurring function is a one-dimensional Gaussian Blur function.

10. The system according to claim **5**, wherein the blurring function is a two-dimensional Gaussian Blur function.

11. A method for reducing image noise, the method comprising:

capturing an image of a drip chamber;

performing an edge detection on the image to generate a first processed image, and

performing an AND-operation on a pixel on a first side of an axis of the first processed image with a corresponding mirror pixel on a second side of the axis of the first processed image to generate a second processed image.

12. The method according to claim **11**, wherein the act of performing the edge detection includes performing a canny edge detection.

13. The method according to claim **11**, further comprising matching a template to the image.

14. The method according to claim **13**, wherein the template includes at least a partial image of a drop of the fluid forming within the drip chamber.

15. The method according to claim **11**, further comprising applying a blurring function to the image of the drip chamber.

16. The method according to claim **15**, wherein the blurring function is a low pass filter.

17. The method according to claim **15**, wherein the act of applying the blurring function comprises blurring in a vertical direction.

18. The method according to claim **15**, wherein the act of applying the blurring function comprises blurring in a horizontal direction.

19. The method according to claim **15**, wherein the blurring function is a one-dimensional Gaussian Blur function.

20. The method according to claim **15**, wherein the blurring function is a two-dimensional Gaussian Blur function.

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